

Original Research Article

The stress factors and pattern of psychiatric disorders among patients with deliberate self-harm: a study in a tertiary care hospital, Rangpur, Bangladesh

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ABSTRACT

Background: Deliberate self-harm (DSH) is a complex behavior of maladaptive response to acute and chronic stress, and likely to be suffering from mental health problems as well as co-morbid general medical conditions, including several non-suicidal intentions to suicide. DSH is previously included in suicide. Sir Thomas Browne first used the word 'suicide' in 1642 in his religion Medici. The word suicide originated from SUI (of oneself) and CAEDES (murder). According to WHO 'suicide' refers to the act of killing oneself intentionally, performed by the person with full knowledge or expectation of the fatal outcome. This study aimed to analyze the stress factors and pattern of psychiatric disorders among patients with DSH.

Methods: This descriptive cross-sectional study was conducted at the department of medicine; emergency and OPD, Rangpur medical college, Rangpur, Bangladesh. Study conducted for 1 year; July 2008-June 2009. A total of 116 DSH cases included in study as per inclusion criteria. Convenience sampling technique was undertaken in this study.

Result: The majority of patients are in the age group of 20-39 years, with 70% in a psychiatric disorder, and in the 40-59 years age group 7.778% have a psychiatric disorder. Age has a significant relationship with DSH ($p < 0.001$). The 90 patients were suffering from psychiatric disorders among them 61 (67.778%) were suffering from depressive episodes, 12 (13.333%) were suffering from a personality disorder, 8 (8.889%) were suffering from mental and behavioral disorders due to psychoactive substance abuse, 7 (7.778%) were suffering from schizophrenia, 1 (1.111%) were suffering from adjustment disorder, 1 (1.111%) suffering from bipolar disorder.

Conclusions: Out of 116 responders 90 (77.586%) were suffering from a psychiatric disorder. Among the patients with psychiatric disorders, 61 (67.778%) patients were found to be suffering from a depressive episode, which was 52.568% of total DSH cases and is an almost treatable disorder.

Keywords: DSH, Depression, Bipolar disorder, Adjustment disorder

INTRODUCTION

Deliberate self-harm (DSH) is a complex behavior of maladaptive response to acute and chronic stress, and likely to be suffering from mental health problems as well as co-morbid general medical conditions, including

several non-suicidal intentions to suicide. DSH is previously included in suicide. Sir Thomas Browne first used the word 'suicide' in 1642 in his religion Medici. The word suicide originated from SUI (of oneself) and CAEDES (murder).¹ According to WHO 'Suicide' refers to the act of killing oneself intentionally, performed by the person with full knowledge or expectation of the fatal

outcome.² DSH describes an act of non-fatal, self-destructive behavior that occurs when an individual's sense of desperation weighs their inherent self-preservation instinct. The importance of this behavior is illustrated by the subsequent risk of suicide, which is at least 3% after 10 or more years.^{3,4} Repetition self-harm places a heavy burden on health and social services and society as a whole. Up to half of the hospital admissions following self-harm are repeat episodes and a history of repetitive self-harm is a key risk factor for suicide.⁵ In India, a study conducted in Bangalore, a majority of these attempted suicides were the young (20-24 years age group) more among males (53%) than females (47%) and from poor middle-class nuclear families.¹ In UK, self-poisoning by benzodiazepine, analgesic, antidepressant (89-92.5%). Self-injury by cutting, jumping, and hanging (10.7-12.1%). Occasionally both methods are used for DSH.⁶ In Finland, self-poisoning by drug overdose 59% self-injury by hanging 18% shooting 6% jumping from high places 6% and jumping under a vehicle 12% are used as suicide methods.⁷ WHO data highlights the severity of the problem estimating 500000 cases of pesticide poisoning and 5000 deaths each year in less developed countries. In Srilanka study showed that agrochemicals are the commonest poisoning agent covering 59% of all poisoning cases.⁸ Self-harm is frequently a highly impulsive act. Many individuals report that they had thought about the act for just minutes before doing it. Alcohol and drug addiction probably increase the likelihood of impulsive acts.⁹ A study on Para suicide in former institute of postgraduate medicine and research in Bangladesh found that more than 80% of Suicide attempters had some psychiatric illness. Study also had shown around 1/3rd (35%) depressive illness, quarters (26.66%) personality disorder, and around one-tenth (13.33%) schizophrenia.¹⁰ A study carried out in Dhaka medical college hospital, Sir Salimullah medical college, Midford hospital and Shaheed Suhrawardy hospital demonstrated psychiatric disorders at 65.4%, medical disorders at 14.4%, both medical and psychiatric disorders at 3.8%, neither psychiatric nor medical disorders 16.3%.¹¹ DSH is most important risk factor for later completed suicide and future self-harm.^{5,12,13} For prevention of suicide and DSH, early detection, and management of psychiatric and general medical disorders associated with DSH, precise knowledge is essential. This study aimed to assess the stress factors and pattern of psychiatric disorders among patients with DSH.

Objectives

General objective

General objective-to analyze stress factors and pattern of psychiatric disorders among patients with DSH.

Specific objectives

Specific objectives were to see the psychiatric disorders among the subjects and to see the methods of DSH.

METHODS

This descriptive cross-sectional study was conducted at the department of medicine; emergency and OPD, Rangpur medical college, Rangpur, Bangladesh. The study duration was 1 year; July 2008- June 2009. A total of 116 DSH cases were included in this study as per the inclusion criteria. A convenience sampling technique was undertaken in this study. A semi-structured questionnaire containing all relevant information about DSH, and psychiatric and co-morbid general medical conditions were used for data collection. Informed consent was taken from the patients. Data analysis was done by using a statistical package for social science (SPSS) 12 version according to the hypothesis and objectives of the study design such as comparing depressive illness and co-morbid general medical conditions among DSH cases. Ethical clearance was obtained from the institutional ethics committee of Rangpur medical college.

Inclusion criteria

All DSH cases were irrespective of age, sex and religion. Patients who had given consent to participate in the study. Patients without gross cognitive impairment were included in the study.

Exclusion criteria

Accidental poisoning, accidental injury, when poisonous substances are introduced by others such as snatchers patients who are deaf and dumb and patients who did not give consent to participate in the study were excluded.

RESULTS

The majority of patients are in the age group of 20-39 years, with 70.000 % in a psychiatric disorder, and in the 40-59 years age group, 7.778 % having a psychiatric disorder. Age has a significant relationship with DSH ($p < 0.001$) (Figure 1).

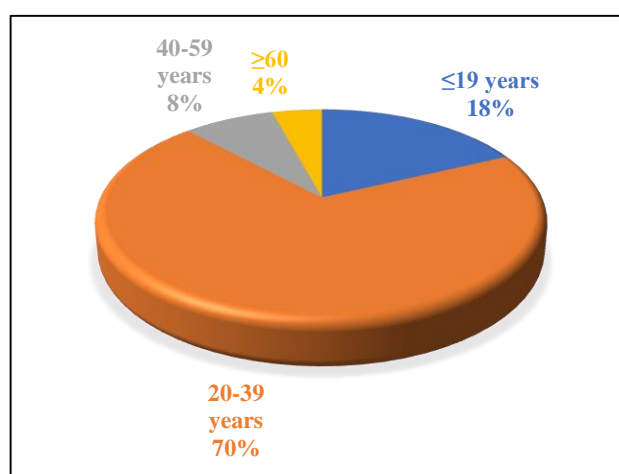


Figure 1: Age distribution of the study subjects, (n=116).

Table 1: Sex distribution, (n=116).

Sex	N	Percentages (%)
Male	33	36.667
Female	57	63.333

The 33 (36.667%) were male and 57 (63.333%) were female in psychiatric disorders. Sex has a significant relationship with DSH ($p < 0.026$) (Table 1).

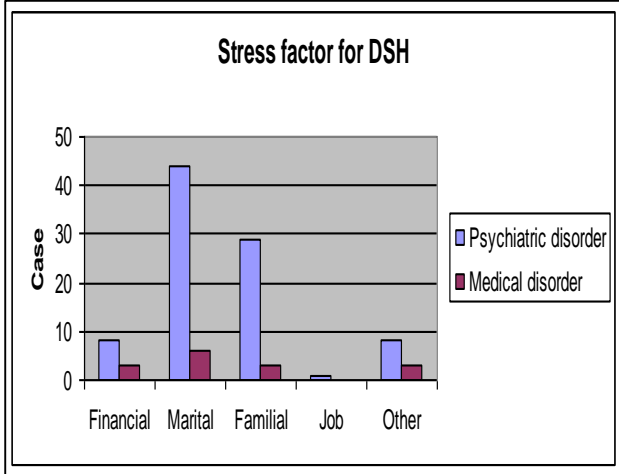


Figure 2: Stress factor for DSH, (n=116).

Nature of stress factor was distributed as 8 (8.889%) vs 3 (20%) were financial, 44 (48.889%) vs 6 (40%) were marital, 29 (32.222%) vs 3 (20.000%) were familial, 1 (1.111%) vs 1 (6.667%) were job-related and 8 (8.889%) vs 3 (20.000%) were due to other stress factors in psychiatric disorder and comorbid general medical conditions respectively. The nature of the stress factor has a significant relationship with DSH ($p < 0.001$) (Figure 2).

Table 2: Distribution of the study subjects according to disorders, (n=116).

Disorder	N	Percent (%)	P value (Z test)
Depressive disorder	61	52.586	<0.001
Other psychiatric disorder	29	25.000	
Co-morbid general medical conditions	15	12.931	
Combined (both psychiatric and comorbid general medical conditions)	11	9.483	
Total	116	100	

Out of 116 DSH cases, 61 (52.586%) were suffering from depressive disorder, 29 (25%) were suffering from other psychiatric disorders, 15 (12.931%) were suffering from co-morbid general medical conditions and 11 (9.483%) were suffering from both psychiatric and comorbid

general medical conditions. A proportionately higher number of patients were suffering from depressive disorder than comorbid general medical conditions ($p < 0.001$). For comparison, 76 DSH cases were taken into consideration, among them, 61 (80.263%) were suffering from depressive disorder, and only 15 (19.737%) suffering from co-morbid general medical conditions (Table 2).

Table 3: Pattern of psychiatric disorders, (n=90).

Disorder	N	Percentages (%)
Depressive episode	61	67.778
Personality disorder	12	13.333
Mental and behavioral disorders due to psychoactive substance abuse	08	08.889
Schizophrenia	07	07.778
Adjustment disorder	01	01.111
Bipolar disorder	01	01.111
Total	90	100

The 90 patients suffering from psychiatric disorders among them 61 (67.778%) were suffering from depressive episodes, 12 (13.333%) were suffering from a personality disorder, 8 (8.889%) were suffering from mental and behavioral disorders due to psychoactive substance abuse, 7 (7.778%) were suffering from schizophrenia, 1 (01.111%) suffering from adjustment disorder, 1 (1.111%) suffering from bipolar disorder (Table 3).

Table 4: Methods of DSH, (n=116).

Methods	N	Percentages (%)
Organo-phosphorous compounds	64	55.172
Sedative	21	18.103
Savlon	08	6.896
Hanging	06	5.172
Herpic	04	3.449
Paracetamol	03	2.587
Copper sulfate	03	2.587
Others	07	6.034
Total	116	100

Organophosphorous compounds (55.172%), sedative (18.103%), Savlon (6.896%), hanging (5.172%), Herpic (3.449%), paracetamol (2.587%), copper sulfate (2.587%) most common methods for DSH (Table 4).

DISCUSSION

This is a descriptive cross-sectional study conducted in Rangpur medical college hospital on DSH. This study was done to obtain reliable and valid data to provide the actual picture of DSH in the northern part of our country. Among the total patients with DSH, the depressive

disorder was found to be 61 (52.586%) other psychiatric disorder was found 29 (25.000%), and patients with comorbid general medical conditions were revealed 15 (12.931%). Among 116 patients 90 (77.586%) were suffering from a psychiatric disorder, 15 (12.931%) were suffering from co-morbid general medical conditions and 11 (9.483%) were suffering from both psychiatric and Comorbid general medical conditions. A depressive episode, personality disorder, mental and behavioral disorder due to psychoactive substance abuse, and schizophrenia were the most common psychiatric disorders. The rate of psychiatric disorder among the patients with DSH in the UK was found 92% among them with depressive disorder 70.7% and 45.9% with a personality disorder.³ Among the 90 patients (out of 116) with psychiatric disorders, 61 (67.778%) patients were found to be suffering from a depressive episode, which was 52.568% of total DSH cases. A study on para suicide in the former institute of postgraduate medicine and research in Bangladesh found that more than 80% of Suicide attempters had some psychiatric illness. The study also had shown that around one-third (35%) of patients are suffering from depressive illness.¹⁰ A study carried out at Sir Salimullah medical college and Midford hospital and Dhaka medical college hospital demonstrated depression in 86% of the patient with DSH.¹⁴ Depression is both a highly disabling and disturbingly widespread phenomenon in all societies. It causes huge suffering and economic costs to individuals and society because of its high prevalence and under treatment. Among the 90 patients (out of 116) with psychiatric disorders, 12 (13.333%) patients were found to be suffering from a personality disorder. This finding was less than the previous study conducted in former institute of postgraduate medicine and research, Dhaka where it was revealed 26.66% of DSH cases suffered from a personality disorder. This contrast might be explained that the patient with a personality disorder might have concealed their history, as well as a personality disorder, which may differ due to the application of diagnostic criteria. Among the 90 patients (out of 116) with psychiatric disorders, 8 (08.889%) patients were found to be suffering from mental and behavioral disorders due to psychoactive substance abuse. In India alcohol and other substance-related disorders were found 11.2% of DSH cases.¹ Bangladesh is in a geographically vulnerable position for drug trafficking across borders of the countries. It is contributing to the increased prevalence of drug abuse. Among 90 patients (out of 116) with psychiatric disorders, 7 (07.778%) patients were found to be suffering from Schizophrenia. This finding was less than the previous study conducted in former institute of postgraduate medicine and research, Dhaka where it was revealed 13.33%) of DSH cases suffered from Schizophrenia. In another study, the most frequent disorders were depression, anxiety, and alcohol misuse, and additionally attention deficit hyperactivity disorder (ADHD) and conduct disorder in younger patients.¹⁵ The most frequent diagnosis made was major depressive

disorder in 18% in a study in Pakistan. Despite the fact that 98% of their sample was Muslims and suicide is strictly forbidden in Islam, 76.8% expressed their intent to die.¹⁶ According to a study in India, social and situational factors appear to play a relatively greater role than psychiatric illness in self-harm and suicide in Mumbai, as in other Asian studies, compared with Europe and North America.¹⁷ Another study identified a prevalence of 2.91% for DSH and found that DSH is associated with generalized and severe psychopathology, wide-ranging substance abuse, and adverse childhood experiences. They also found significant racial and ethnic differences in DSH.¹⁸

Limitations

The study was conducted in a single hospital with a small sample size. So, the results may not represent the whole community. Moreover, during the time of the interview some patients tried to avoid the investigator because of social stigma, fear of publishing in newspapers, and sometimes fear of police harassment.

CONCLUSION

This study concluded that out of 116 responders 90 (77.586%) were suffering from a psychiatric disorder. Among the patients with psychiatric disorders, 61 (67.778%) patients were found to be suffering from a depressive episode, which was 52.568% of total DSH cases and is an almost treatable disorder.

Recommendations

At present, evidence is lacking to indicate the most effective forms of treatment for patients who deliberately harm themselves. This is a serious situation given the size of the population at risk and the risks of subsequent self-harm, including suicide. Identification of risk factors and improvement of the aftercare delivery system is the call of time. Moreover, further studies should be conducted involving a large sample size and multiple centers.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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